

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7 (Canceled).

Claim 8 (Currently Amended): A system for etching a wafer, the system capable of determining endpoint of a plasma etching operation of a surface on a wafer, the surface of the wafer having features being etched, comprising:

a detector for detecting ~~reflected~~ light that is steered toward a specific die area on the surface of the wafer and reflected from the surface of the wafer, the reflected light being detected by discrete detection regions arranged to cover selected locations that are part of the specific die area on the surface of the wafer, each detection region being configured to generate a specific optical signal across a frequency band, one of the detection regions being configured to correlate with a model optical signal, whereby endpoint of the plasma etching operation is based on feedback from an identified one of the detected regions.

Claim 9 (Original): The system of claim 8, wherein when the one of the detection regions being configured to correlate with a model optical signal is determined, the specific optical signal of the one of the detection regions is from the identified one of the detection regions and is used to determine endpoint of the plasma etching operation.

Claims 10-18 (Canceled).

Claim 19 (Currently Amended): A plasma processing system for use in semiconductor manufacturing, comprising:

a plasma processing chamber having an interior region, an exterior, and a viewport providing visual access to the interior region from the exterior;

a light source configured to provide a broad beam light for directing through the viewport onto an active surface of a semiconductor wafer positioned within the interior region of the plasma processing chamber;

a plurality of detector optical fibers, each of the plurality of detector optical fibers having a detection end and an analysis end, each detection end being positioned in a fiber optic aperture of the lens system;

an imaging spectrometer, the imaging spectrometer receiving the analysis end of each of the plurality of detector optical fibers; and

a 2-D CCD detector array to analyze a received optical signal from each of the plurality of detector optical fibers,

wherein an endpoint of plasma processing is determined based on an analysis of the received optical signal from each of the plurality of detector optical fibers, wherein the analysis of the received optical signal from each of the plurality of detector optical fibers includes matching the received optical signal from each of the plurality of detector optical fibers to a model optical signal for a desired endpoint to plasma processing, and wherein each detection end of the plurality of detector optical fibers is directed toward a separate area of a specific die region such that the plurality of detector optical fibers is arranged to cover the specific die region.

Claim 20 (Canceled).

Claim 21 (Original): The plasma processing system of claim 19, wherein the CCD detector array provides a plot of at least one analyzed received optical signal.

Claim 22 (Original): The plasma processing system of claim 19, wherein the plasma processing chamber is a plasma etch chamber.

Claim 23 (Original): The plasma processing system of claim 19, wherein the plasma processing chamber is a plasma deposition chamber.